

Claims

- [c1] 1. A gas turbine (1, 101, 201) comprising a first compressor (2), a combustion chamber (16) and a first turbine (11), the turbine being adapted to drive the compressor via a first shaft (10a, 10b), wherein the gas turbine comprises a bleed valve (12) arranged upstream of the first turbine for conducting part of a gas compressed by the compressor past the turbine during engine-braking wherein the bleed valve (12) is adapted in such a way that its opening area for regulating the quantity of gas which is intended to be conducted past the first turbine (11) is controlled depending on the pressure in the gas from the compressor (2).
- [c2] 2. The gas turbine as claimed in OLE_LINK1claim 1, wherein OLE_LINK1the bleed valve (12) comprises a spring-loaded opening means (38) for regulating said opening area.
- [c3] 3. The gas turbine as claimed in claim 1, wherein the bleed valve (12) is arranged upstream of the combustion chamber (16).
- [c4] 4. The gas turbine as claimed in claim 1, wherein the gas

turbine comprises a power turbine (20) adapted to drive a second shaft (21), which power turbine is arranged downstream of the first turbine (11) and is adapted to be driven by the gas from it.

[c5] 5. The gas turbine as claimed in claim 4, wherein the gas turbine comprises a transmission (27) for selective coupling together of said second shaft (21) and said first shaft (10a, 10b).

[c6] 6. The gas turbine as claimed in claim 5, wherein the transmission (27) comprises a clutch (31) for said selective coupling together of the driving shaft (23) and the shaft (10a, 10b).

[c7] 7. The gas turbine as claimed in claim 1, wherein the gas turbine comprises means (40) for variable regulation of the flow to the power turbine (20).

[c8] 8. The gas turbine as claimed in claim 1, wherein the gas turbine comprises a heat exchanger (14) arranged between the compressor (2) and the combustion chamber (16).

[c9] 9. The gas turbine as claimed in claim 9, wherein the bleed valve (12) is arranged upstream of the heat exchanger (14).

- [c10] 10. The gas turbine as claimed in claim 1, wherein the gas turbine comprises a second compressor (5) arranged downstream of said first compressor (2), and in that the bleed valve (12) is arranged upstream of the second compressor (5).
- [c11] 11. The gas turbine as claimed in claim 1, wherein the gas turbine comprises means (45) for variable regulation of the flow to the compressor (2) for regulation of the braking effect.
- [c12] 12. A vehicle comprising a gas turbine as claimed in claim 1, wherein the arrangement is configured to provide propulsion to a vehicle.
- [c13] 13. A method for engine-braking a gas turbine (1, 101, 201) comprising a first compressor (2), a combustion chamber (16) and a first turbine (11), the turbine being adapted to drive the compressor via a first shaft (10a, 10b), wherein part of the gas compressed by the compressor (2) is conducted past the first turbine (11) during engine-braking, wherein the quantity of gas which is conducted past the first turbine (11) is controlled depending on the pressure in the gas from the compressor (2).
- [c14] 14. The method as claimed in claim 13, wherein the

opening area of a bleed valve (12) adapted for said conducting-off of the gas past the first turbine (11) is controlled directly by said pressure in the gas from the compressor.

- [c15] 15. The method as claimed in claim 14, wherein the opening area is regulated by an opening means (38) which is arranged in the bleed valve (12) and is adapted to be moved counter to a predetermined spring force.
- [c16] 16. The method as claimed in claim 13, wherein the part of the compressed gas is conducted past the combustion chamber (16).
- [c17] 17. The method as claimed in claim 13, wherein the gas turbine comprises a power turbine (20) adapted to drive a second shaft (21), which power turbine is arranged downstream of the first turbine (11) and is adapted to be driven by the gas from the first turbine.
- [c18] 18. The method as claimed claim 13, wherein the driving shaft (21) is coupled together, into driving connection, with the first shaft (10a, 10b) for engine-braking.
- [c19] 19. The method as claimed in claim 20, wherein the coupling together of the shafts (10a, 10b, 21) takes place after detected actuation of a brake control.

- [c20] 20. The method as claimed in claim 13, wherein the fuel flow to the combustion chamber (16) is reduced, and in that a sufficiently large part of the gas compressed by the compressor (2) is conducted to the combustion chamber in order to maintain such a flame in the combustion chamber that the temperature of the parts which are hot during operation of the gas turbine is kept above a predetermined temperature.
- [c21] 21. The method as claimed in claim 13, wherein the guide vanes are adapted for regulation of the gas quantity to the power turbine are adjusted into a braking position, the power turbine thus being braked.
- [c22] 22. The method as claimed in claim 21, wherein said adjustment of the guide vanes is carried out after a detected reduction in the opening of the throttle.
- [c23] 23. The method as claimed in claim 13, wherein the gas compressed by the compressor which is conducted past the first turbine (11) is conducted directly into the atmosphere.
- [c24] 24. The method as claimed in claim 13, wherein the gas turbine comprises a heat exchanger arranged downstream of the compressor and upstream of the combustion chamber.

[c25] 25. The method as claimed in claim 24, wherein said part of the compressed gas is conducted past the heat exchanger.